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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/748,623	12/22/2000	Richard A. Keeney	MGI-174	4584

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LAW OFFICE OF BARRY R LIPSITZ
755 MAIN STREET
MONROE, CT 06468

EXAMINER

SHAPIRO, LEONID

ART UNIT	PAPER NUMBER
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2673

DATE MAILED: 09/20/2002

4

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application 09/748,623	Applicant(s) KEENEY ET AL.	
	Examiner Leonid Shapiro	Art Unit 2673	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-28 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-28 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
 If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. ____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
 * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). ____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>2, 3</u> . | 6) <input type="checkbox"/> Other: _____ |

Specification

1. The disclosure is objected to because of the following informalities: On page 9, Line 12 refers to FLC-on-CMOS. It is not clear what FLC means. Appropriate correction is required.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

2. Claims 1-28 rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. The specification/disclosure does not provide support for recited in claims 1-28 as a whole how to make or use applicant's claimed invention by one skilled in the art. It is not clear how the method for repairing inoperative pixels (or apparatus) could apply to "a display" such as for example: AMLCD TFT panels with stringent requirements for increased aperture ratio and mobility of the TFT transistors itself. Equally difficult to imagine how above mentioned method could apply to DMD (Digital Mirror Display) displays (See examiner cited reference-US Patent No. 5,659,374).

All claims and title need to be corrected to apply only to reflective LC micro-displays with CMOS driving circuitry under each pixel as it is done in the Abstract and specification/disclosure.

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Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 1-2, 15-16 rejected under 35 U.S.C. 103(a) as being unpatentable over Henley (US Patent No. 5,459,410), cited by the applicant in view of Kuwashiro (US Patent No. 5,945,984), cited by the applicant.

As to claim 1, as best understood by examiner, Henley teaches a method for repairing inoperative pixels in display with identifying defective pixel (See Fig. 3b, item 20, 32, in description See Col.6, Lines 11-19 and Col. 7, Lines 33-39); disconnecting the defective drive circuitry from inoperative pixel (See Fig. 14, items 11, 17, in description See Col. 12, Lines 28-32); connecting the inoperative pixel to a working drive circuit (See Fig. 14, items 11, 317, in description See Col. 12, Lines 32-36).

Henley does not show connection to a working drive circuit of nearby pixel, instead he shows connection to the redundant TFT of the same pixel.

Kuwashiro shows how the desired driver could be connected to fix a defect in displayed image (See Fig. 4, items 701, 731-1, 731-2, in description See Col. 9, Lines 35-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to use driver as shown by Kuwashiro in the Henley apparatus in order to repair inoperative pixel in the display.

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One of ordinary skill in the art would select nearby pixel because of physical proximity the pixel and driver.

As to claim 2, as best understood by examiner, Henley teaches a method for repairing inoperative pixels in display with providing additional circuitry associated with each pixel in the display, which circuitry connects the inoperative pixel to the working drive circuit (See Fig. 14, items 11, 317, in description See Col. 12, Lines 32-36).

As to claim 15, as best understood by examiner, Henley teaches an electronic display apparatus capable of repairing inoperative pixels in with plurality of pixels; drive circuitry for controlling the pixels (See Fig. 3b, item 20, 32, in description See Col. 6, Lines 11-19 and Col. 7, Lines 33-39); means for disconnecting the defective drive circuitry from inoperative pixel (See Fig. 14, items 11, 17, in description See Col. 12, Lines 28-32); means for connecting the inoperative pixel to a working drive circuit (See Fig. 14, items 11, 317, in description See Col. 12, Lines 32-36).

Henley does not show connection to a working drive circuit of nearby pixel, instead he shows connection to the redundant TFT of the same pixel.

Kuwashiro shows how the desired driver could be connected to fix a defect in displayed image (See Fig. 4, items 701, 731-1, 731-2, in description See Col. 9, Lines 35-44). It would have been obvious to one of ordinary skill in the art at the time of the invention to use driver as shown by Kuwashiro in the Henley apparatus in order to repair inoperative pixel in the display. One of ordinary skill in the art would select nearby pixel because of physical proximity the pixel and driver.

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As to claim 16, as best understood by examiner, Henley teaches an apparatus for repairing inoperative pixels in display with providing additional circuitry associated with each pixel in the display, which circuitry connects the inoperative pixel to the working drive circuit (See Fig. 14, items 11, 317, in description See Col. 12, Lines 32-36).

Conclusion

4. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

The Song et al. (US Patent No. 6,313,889 B1) reference discloses matrix-type display device capable of being repaired in pixel unit.

The Lin et al. (US Patent No. 6,205,239 B1) reference discloses system and method for circuit repair.

The Gale et al. (US Patent No. 5,659,374) reference discloses a method of repairing defective pixels.

The Wu (US Patent No. 5,260,818) reference discloses display panel provided with repair capability of defective elements.

The Henley (US Patent No. 5,175,504) reference discloses method and apparatus for automatically inspecting and repairing a simple matrix circuit panel.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Leonid Shapiro whose telephone number is 703-305-5661. The examiner can normally be reached on 8 a.m. to 5 p.m..

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Bipin Shalwala can be reached on 703-305-4938. The fax phone numbers for the organization where this application or proceeding is assigned are 703-872-9314 for regular communications and 703-872-9314 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-4750.

ls
September 18, 2002


BIPIN SHALWALA
SUPERVISORY PATENT EXAMINER
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